

**Flood Control Project Maintenance
Levee Inspections****LMA District Cover Sheet
Spring 2015 Levee Inspection Results****Sutter Maintenance Yard Hamilton Bend**

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
* Overall LMA Rating (Fall Only)				

** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

*
SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Spring 2015 Levee Inspection Results

Sutter Maintenance Yard Hamilton Bend

Waterway			Bank	Unit Miles
Unit No. 01 Feather River Hamilton Bend			Right	3.39
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	04/27/2015 - 04/27/2015			
DWR Inspector	Michael Pitta			
Accompanied By				

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2015

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	04/27/2015 04/27/2015	Michael Pitta

LM Start		Rating **	A	Issue No.	7		
LM End		Issue Type +	Ma	Location *	WS		
Category	Earthen Levee			GPS Latitude/Longitude			
				Start		End	
Item	Operations & Maintenance Manuals				°		°
					°		°
DWR ID	DWR_ST0005_01_s _ 2013_7						
Action/Comments							
Inspector Comments: The O&M manuals are located at the Sutter Maintenance Yard.							

No Photos

LM Start		Rating **	A	Issue No.	8		
LM End		Issue Type +	Ma	Location *	WS		
Category	Earthen Levee			GPS Latitude/Longitude			
				Start		End	
Item	Emergency Supplies & Equipment				°		°
					°		°
DWR ID	DWR_ST0005_01_s _ 2013_8						
Action/Comments							
Inspector Comments: Emergency supplies and equipment are stored at the Sutter Maintenance Yard.							

No Photos

LM Start		Rating **	A	Issue No.	9	
LM End		Issue Type +	Ma	Location *	WS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start		End
Item	Flood Preparedness & Training				°	
					°	
DWR ID	DWR_ST0005_01_s _ 2013_9					
Action/Comments						
Inspector Comments: Sutter Maintenance Yard employees attend the annual Flood Fight class put on by DWR inspector Bob Duffy.						

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2015

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	04/27/2015 04/27/2015	Michael Pitta

LM Start	0.01	Rating **	A	Issue No.	14
LM End	1.22	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.439882 °	39.456794 °
				-121.641429 °	-121.639288 °
DWR ID	DWR_ST0005_01_s _ 2015_14				
Action/Comments					
Control annual grass and weeds on the levee slopes and easements.					

No Photos

LM Start	0.01	Rating **	A/W	Issue No.	13
LM End	1.22	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.439884 °	39.456794 °
				-121.641430 °	-121.639288 °
DWR ID	DWR_ST0005_01_s _ 2015_13				
Action/Comments					
Control annual grass and weeds on the levee slopes and easements.					

Photo 1 of 1 : SP_2015_ST0005_289_13_20150429_00013.jpg



View of the vegetation on the landside of the levee facing upstream.

LM Start	0.19	Rating **	M	Issue No.	15
LM End	0.19	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.442435 °	39.442435 °
				-121.641760 °	-121.641760 °
DWR ID	DWR_ST0005_01_s _ 2015_15				
Action/Comments					
Elderberries are blocking visibility and flood fight capability.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2015

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	04/27/2015 04/27/2015	Michael Pitta

LM Start	0.32	Rating **	A/W	Issue No.	16
LM End	0.32	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.444301 °	39.444301 °
				-121.641765 °	-121.641765 °
DWR ID	DWR_ST0005_01_s _ 2015_16				
Action/Comments					
Control annual grass and weeds on the levee slopes and easements.					

No Photos

LM Start	0.37	Rating **	M	Issue No.	12
LM End	0.37	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Crown Surface / Depressions / Rutting			39.445008 °	39.445008 °
				-121.641811 °	-121.641812 °
DWR ID	DWR_ST0005_01_s _ 2014_12				
Action/Comments					
Repair depressions or ruts in the crown or slope.					

Photo 1 of 1 : SP_2015_ST0005_289_12_20150401_00004.jpg



This photo was taken from the levee crown facing north looking at crown surface depressions caused by vehicle traffic. Spring 2014.

LM Start	0.40	Rating **	M	Issue No.	2
LM End	0.40	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Crown Surface / Depressions / Rutting			39.445420 °	39.445430 °
				-121.641809 °	-121.641802 °
DWR ID	DWR_ST0005_01_s _ 2015_2				
Action/Comments					
Add appropriate material and re-grade the levee to bring the crown above the design elevation.					

Photo 1 of 1 : SP_2015_ST0005_289_2_20150401_00001.jpg



Deep rut in crown. Repair prior to flood season.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2015

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	04/27/2015 04/27/2015	Michael Pitta

LM Start	0.45	Rating **	M	Issue No.	17
LM End	0.45	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Crown Surface / Depressions / Rutting			39.446168 °	39.446168 °
				-121.641742 °	-121.641742 °
DWR ID	DWR_ST0005_01_s _ 2015_17				
Action/Comments					
Repair depressions or ruts in the crown or slope.					

No Photos

LM Start	0.80	Rating **	M	Issue No.	29
LM End	0.80	Issue Type +	En	Location *	CR
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.451078 °	39.451078 °
				-121.640773 °	-121.640773 °
DWR ID					
Action/Comments					
Inspector Comments: FS_ID:13237 DS_ID:17047 EP_NO: 927 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: low spot on WS slope; sink hole or section dug-unable to tell; hole on levee toe. This crossing was listed in the USACE Periodic Inspection as ID# USACE_CESPK_HAM1_2010_a_0029 no issues reported 5/14/2013 SBFCA project recommends removal 5/14/2013 Same as last inspection. FIELD_STRUCT_DESC: Abandoned 10-inch steel pipe through the levee 10.4 feet below the crown. (Permit No. 927) FS Date: 05/14/2013					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2015

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	04/27/2015 04/27/2015	Michael Pitta

LM Start	1.05	Rating **	A/W	Issue No.	28
LM End	1.05	Issue Type +	En	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.454485 °	39.454485 °
				-121.640309 °	-121.640309 °
DWR ID	DWR_ST0005_01_f_2013_28				
Action/Comments					
Building					
Inspector Comments: Abandoned inlet structure.					

Photo 1 of 1 : SP_2015_ST0005_289_28_20150401_00005.jpg



This photo was taken facing north looking down the levee crown at an old inlet structure. Fall 2013.

LM Start	1.05	Rating **	M	Issue No.	30
LM End	1.05	Issue Type +	En	Location *	CR
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.454557 °	39.454557 °
				-121.640274 °	-121.640274 °
DWR ID					
Action/Comments					
Inspector Comments: FS_ID:13241 DS_ID:17046 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: abandoned WS gates closed; handles broken; Structure needs to be properly abandoned. This crossing was listed in the USACE Periodic Inspection as ID# USACE_CESPK_HAM1_2010_a_0043 no issues reported5/14/2013 Same as last inspection. FIELD_STRUCT_DESC: Abandoned Sutter Butte Canal head gate structure, Six 6 by 8 foot concrete culvert 35.8 feet below the crown. Stems on gates are removed and gates are in a closed position. This entry matches the Drainage or Irrigation Structure referenced in O&M manual (Historic Station 47+00). (USACE O&M Manual, 1957) FS Date: 05/14/2013					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2015

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	04/27/2015 04/27/2015	Michael Pitta

LM Start	1.08	Rating **	U	Issue No.	18
LM End	1.08	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Crown Surface / Depressions / Rutting			39.454935 °	39.454935 °
				-121.640097 °	-121.640097 °
DWR ID	DWR_ST0005_01_s _ 2015_18				
Action/Comments					
Repair depressions or ruts in the crown or slope.					

Photo 1 of 2 : SP_2015_ST0005_289_18_20150429_00011.jpg



View of the depression on the crown facing downstream.

LM Start	1.08	Rating **	U	Issue No.	18 (cont)
LM End	1.08	Issue Type +	Ma	Location *	CR

Photo 2 of 2 : SP_2015_ST0005_289_18_20150429_00012.jpg



View of the depression on the crown facing the waterside of the levee.

LM Start	1.08	Rating **	U	Issue No.	19
LM End	1.08	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.454935 °	39.454935 °
				-121.640097 °	-121.640097 °
DWR ID	DWR_ST0005_01_s _ 2015_19				
Action/Comments					
Pole					
Inspector Comments: Decayed pole has left a deep hole in the levee.					

Photo 1 of 1 : SP_2015_ST0005_289_19_20150429_00014.jpg



View of the pole on the landside of the levee facing upstream. The pole is hollow and appears to be very deep.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2015

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	04/27/2015 04/27/2015	Michael Pitta

LM Start	1.17	Rating **	M	Issue No.	31
LM End	1.17	Issue Type +	En	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.456287 °	39.456287 °
				-121.639530 °	-121.639530 °
DWR ID					
Action/Comments					
Inspector Comments: FS_ID:13238 DS_ID:17045 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: Abandoned structure: Structure is non-operational, slide gate is completely buried; top of slide gate barely visible from levee 5/14/2013 Same as last inspection. FIELD_STRUCT_DESC: Abandoned 24-inch pipe through the levee 16.5 feet below the crown. Slide gate in CM riser on the waterward slope. No features of structure were found with the exception of slide gate frame. FS Date: 05/14/2013					

No Photos

LM Start	1.39	Rating **	M	Issue No.	22
LM End	1.70	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.457986 °	39.459597 °
				-121.638016 °	-121.633550 °
DWR ID	DWR_ST0005_01_s _ 2015_22				
Action/Comments					
Control annual grass and weeds on the levee slopes and easements.					

No Photos

LM Start	1.39	Rating **	M	Issue No.	21
LM End	3.30	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.457986 °	39.471125 °
				-121.638016 °	-121.609223 °
DWR ID	DWR_ST0005_01_s _ 2015_21				
Action/Comments					
Control annual grass and weeds on the levee slopes and easements.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2015

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	04/27/2015 04/27/2015	Michael Pitta

LM Start	1.39	Rating **	M	Issue No.	20
LM End	3.30	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.457986 °	39.471125 °
				-121.638015 °	-121.609223 °
DWR ID	DWR_ST0005_01_s _ 2015_20				
Action/Comments					
Control annual grass and weeds on the levee slopes and easements.					

No Photos

LM Start	1.48	Rating **	M	Issue No.	4
LM End	3.26	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Trim / Thin Trees			39.458060 °	39.470433 °
				-121.636332 °	-121.609200 °
DWR ID	DWR_ST0005_01_s _ 2013_4				
Action/Comments					
Trim and thin trees to allow visibility of the ground and room to flood fight.					

Photo 1 of 1 : SP_2015_ST0005_289_4_20150401_00002.jpg



L/S trees.

LM Start	1.51	Rating **	M	Issue No.	5
LM End	1.69	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Trim / Thin Trees			39.458255 °	39.459451 °
				-121.635808 °	-121.633670 °
DWR ID	DWR_ST0005_01_s _ 2013_5				
Action/Comments					
Trim and thin trees to allow visibility of the ground and room to flood fight.					

Photo 1 of 1 : SP_2015_ST0005_289_5_20150401_00003.jpg



W/S trees.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2015

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	04/27/2015 04/27/2015	Michael Pitta

LM Start	3.17	Rating **	M	Issue No.	32
LM End	3.17	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.470269 °	39.470269 °
				-121.609229 °	-121.609229 °
DWR ID					
Action/Comments					
Inspector Comments: FS_ID:13242 DS_ID:17044 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: Abandoned Structure: WS- reminince of gates and concrete standpipe; LS-reminince of concrete headwall and pump statio5/14/2013 Same as last inspection. FIELD_STRUCT_DESC: Abandoned western canal head gate inlet structure. One (1) of 2 culverts, 8 by 8-foot concrete culverts through the levee 25.0 feet below the crown. Three slide gates on the waterward end. Concrete stairs on the waterward slope. Concrete headwall at both toes. This entry matches the Drainage or Irrigation Structure referenced in O&M manual (Historic Station 170+00). (USACE O&M Manual, 1957) FS Date: 05/14/2013					

No Photos

LM Start	3.17	Rating **	M	Issue No.	33
LM End	3.17	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.470269 °	39.470269 °
				-121.609229 °	-121.609229 °
DWR ID					
Action/Comments					
Inspector Comments: FS_ID:13243 DS_ID:17056 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: Abandoned Structure: WS- reminince of gates and concrete standpipe; LS-reminince of concrete headwall and pump station 5/14/2013 Same as last inspection. FIELD_STRUCT_DESC: Abandoned western canal head gate inlet structure. Two (2) of 2 culverts, 8 by 8-foot concrete culverts through the levee 25.0 feet below the crown. Three slide gates on the waterward end. Concrete stairs on the waterward slope. Concrete headwall at both toes. This entry matches the Drainage or Irrigation Structure referenced in O&M manual (Historic Station 170+00). (USACE O&M Manual, 1957) FS Date: 05/14/2013					

No Photos

* Location		** Rating		+ Issue Type	
LS : Land Side	N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiency	
WS : Water Side		M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence	
CR : Crown		U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En : Enforcement	